



Water & Environment Sector PROJECT PROFILE

Wastewater Treatment & Reuse Facilities for Small Communities

March 2011



Wastewater (septage) is commonly hauled by tankers for disposal in the open environment of rural areas lacking treatment plants.

PROJECT SNAPSHOT

Implemented by: International Resources Group Ltd.

Duration: 2004 – 2011

Total Funding: \$23.6 million

Beneficiaries: 35,000 households

Geographic Coverage: 3 rural municipalities in the south of Jordan (Shobak Treatment Plant); and 5 municipalities in the north (North Shouneh Treatment Plant)

BACKGROUND

Constructing piped wastewater collection systems for rural communities is usually expensive and difficult to justify because of the relatively large areas involved compared to the number of people served. Instead, households use cesspits to collect their wastewater (septage). Where only distant treatment plants are available, the costs of transporting septage can be quite expensive, placing a high financial burden on many households. As a result, septage is often disposed of into the nearby open environment, resulting in pollution of land and precious water resources. Where this is prohibited, those who cannot afford the higher trucked disposal costs often leave their cesspits to overflow onto the streets.

The Government of Jordan aims to construct central treatment plants for such communities, with wastewater collection initially through trucking until other collection systems are justified. This approach facilitates serving several neighboring communities at once. The primary objective of the Small Communities Project is to construct two such treatment and reuse facilities, using proven low (operation and maintenance) cost designs, so that they can be turned over to local governments – thereby also advancing the Government's decentralization initiative. The two facilities are intended to serve as models for other small communities.

The areas of Shobak and North Shouneh were selected among ten candidate communities to be the first involved in the project. Communities in both of these areas have relatively large quantities of septage needing disposal, with their citizens bearing high associated costs, especially when disposal at distant treatment plants is enforced. As such, they offered the strongest opportunity to improve the health and environmental situation and to reduce heavy financial burdens on households. These two areas also presented strong potential for replication within their regions and beyond.

ACTIVITIES

- Selecting the two communities for implementing the project
- Preparing feasibility studies and environmental impact assessments
- Preparing detailed designs, tender documents and supervising construction



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A tanker discharges septage into the new Shobak Wastewater Treatment Plant, southern Jordan.



The North Shouneh Wastewater Treatment and Reuse Facility is still under construction.

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- Developing local capacity to operate and maintain the facilities and turning them over to local governments
- Monitoring and supporting plant operations and treated wastewater reuse
- Assisting in the formulation of policies, guidelines and standards related to wastewater treatment and reuse in small communities

PROGRESS & ACHIEVEMENTS

- Planned, designed and tendered the construction of two wastewater treatment plants
- Signed decentralization agreements between the central Water Authority and two municipalities (the first of their kind in Jordan)
- Reduced septage disposal costs significantly with the Shobak facility, in operation by the municipality since early 2010
- Helped revise the national wastewater treatment and reuse standards to become better adapted for small communities
- North Shouneh facility expected to commence operations during the summer of 2011

PARTNERS

- International Resources Group Ltd.
- ECODIT LLC
- Arabtech-Jardaneh Water and Environment
- Stearns & Wheler
- Gibraltar Contracting Co. LLC
- Ministry of Water and Irrigation / Water Authority of Jordan
- Ministry of Municipalities and Rural Affairs
- New Shobak Municipality and the Municipalities of Husseiniyeh and Qadissiyeh
- Municipalities of Mu'ath Bin Jabal (North Shouneh), Tabqet Fahel, Sharhabeel Bin Hasna, Kura and Taybeh